TWO INTERESTING SPECIES OF DRABA FROM THE CHARLESTON MOUNTAINS OF NEVADA

C. Leo Hitchcock

Among the many interesting discoveries Mr. I. W. Clokey has made in his botanical exploration of the Charleston Mountains are two species in the genus *Draba*. Puzzled as to their identity, and suspecting that they were new to science, Mr. Clokey kindly turned them over to me for study. Since he is endeavoring to clarify and enumerate the known flora of the Charleston Mountains, it seems advisable to discuss these plants at this time.

Draba paucifructus Clokey et C. L. Hitchcock sp. nov.

Planta perennans, 4–12 cm. alta, multicaulis, inferne vestigiis foliorum emortuorum persistentibus; caulibus simplicibus, aphyllis vel 1–2-phyllis, glabris vel inferne pilis stellatis adspersis; foliis basilaribus rosulatim congestis, obovatis ad obovato-oblanceolatis, integris vel denticulatis, 3–15 (25) mm. longis, 1.5–4 (8) mm. latis, pilis ramuloso-stellatis hirtis, ad pilis simplicibus ciliatis; racemis 3–12-floribus; pedicellis 1–5 (7) mm. longis; sepalis 1.5 mm. longis, pilis symplicibus vel stellatis obsitis; petalis albis, spathulatis, *ca.* 2.5 mm. longis; ovariis 20–30-ovulatis; siliculis in pedicellis erecto-patulis 1–5–(7) mm. longis adscendentibus, lineari-lanceolatis vel elliptico-lanceolatis, 5–10 mm. longis, 1.5–2.25 mm. latis, compressis, stylis brevissimis (0.1–0.2 mm.) coronatis.

A low perennial 4–10 (12) cm. tall, with 1 to several crowns, each crown with 1–4 stems; leaves numerous, nearly all in basal rosette, obovate to obovate-oblanceolate, rounded to obtuse, entire or very remotely denticulate, 3–15 (25) mm. long, 1.5–4 (8) mm. broad, rather densely pubescent with 4–7-rayed, nearly sessile stellae, the margins also more or less short ciliate, midribs marcescent; stems glabrous, or slightly stellate near base, usually devoid of leaves, sometimes with 1 leaf at base, less commonly the first flower from a leaf-axil; racemes elongate, mostly at least half the total height of plant, only 3–12-flowered; pedicels glabrous, erect or nearly so, 1–5 (7) mm. long; sepals *ca.* 1.5 mm. long, somewhat pilose to stellate; petals white, nearly spatulate, rounded to retuse, *ca.* 2.5 mm. long; silicles linear-lanceolate to narrowly elliptic-lanceolate, 5–10 mm. long, 1.5–2.25 mm. broad, flattened; style barely noticeable (0.1–0.2 mm. long); seeds 20–30.

Type. Peak Trail, Charleston Mountains (Spring Mountain Range), Nevada, at 3180 meters, August 3, 1938, *Clokey 7953,* in the Clokey Herbarium; isotype in the University of Washington Herbarium.

Other material (all from the Charleston Mountains, Nevada). Rainbow Falls, August 3, 1937, *Clokey 7526;* Kyle Canyon, July

TABLE 1.—Comparison of *Draba paucifructus, D. nivalis, D. crassifolia* and *D. stenoloba*

D. paucifructus	*D. nivalis*	*D. crassifolia*	*D. stenoloba*
perennial, crowns usually more than one	perennial, crowns usually more than one	biennial or shortlived perennial	biennial or shortlived perennial
plants usually less than 10 cm. tall	plants usually less than 10 cm. tall	plants usually less than 10 cm. tall	plants usually over 10 cm. tall
leaves mostly basal (sometimes one or two cauline)	leaves mostly basal (sometimes one or two cauline)	scarcely ever with cauline leaves	always with one or (more frequently) two to several cauline leaves
pubescence of leaves abundant, several-rayed, but not stellate-pannose, not cinereous	pubescence of leaves dense, finely stellate-pannose, usually cinereous	leaves glabrous or ciliate	leaves ciliate and often with 4–7-rayed hairs
stems glabrous or but sparsely stellate at base	stems usually stellate	stems glabrous	stems strigose usually
silicles 3–12, 5–10 mm. long, much like those of *D. crassifolia*	silicles 3–15, 7–20 mm. long	silicles 5–20, 5–10 mm. long	silicles 10–30, 8–15 mm. long
styles 0.1–0.2 mm. long	styles 0.2–0.5 mm. long	styles lacking	styles lacking

22, 1930, *Goodman & Hitchcock 1682* (Dudley Herb., Stanford and Mo. Bot. Gard.); eastern slope at 10,000 feet, June 26, 1926, *E. C. Jaeger* (Pomona); Big Falls, July 14, 1937, *Clokey 7425;* Peak Trail, August 8, 1935, *Clokey 5483,* July 22, 1937, *Clokey 7795;* Charleston Peak, July 16, 1936, *Clokey 7112,* July 22, 1937, *Clokey 7527,* August 3, 1938, *Clokey 7952.* For nearly all the Clokey collections a large number of duplicates was prepared and these will eventually be distributed rather widely.

The relationship of this species is exceedingly perplexing. Mr. Clokey, who had an excellent opportunity of observing it in the field, was convinced that it was undescribed and had prepared a specific description before he sent me the material. I, too, was convinced of its novelty but thought it might feasibly be accorded varietal rank under *Draba nivalis* Lilj. (*D. lonchocarpa* Rydb.). However, it cannot with certainty be considered more closely re-

lated to that species than to *D. crassifolia* Grah. or even to *D. stenoloba* Ledeb. I agree, therefore, with Mr. Clokey, that it must be considered to be of specific rank and regard it as having evolved in this isolated southern mountain range. Perhaps the most striking thing about the species is its remarkable constancy. Mr. Clokey has collected many individuals and they are all as nearly alike as plants can reasonably be expected to be. Incidentally, the same can be said for the other species peculiar to this region, namely, *D. Jaegeri* Munz & Johnston, although it has been collected so much less frequently that the assertion is made with less assurance.

The reason for according *Draba paucifructus* specific rank can best be seen by comparing it (Table 1) with the three species with which it is most likely to be confused.

From the above comparison it may be seen that *Draba paucifructus* is perhaps most closely related to *D. nivalis* and it seems not unlikely that it is really a stranded relative of that species, differing chiefly in the shorter fruits and in the much less abundant, coarser pubescence on the leaves.

The other species, represented by three collections from Rainbow Falls, Charleston Mountains, *Clokey 7111, 7951,* and *8202,* is *Draba brachystylis* Rydberg (Bull. Torr. Bot. Club 29 : 240. 1902). Since *D. brachystylis* has been known hitherto only from the Wasatch Mountains of Utah (collections from American Fork Canyon, Alta, and Thistle, by M. E. Jones, and from Big Cottonwood Canyon, *Rydberg & Carlton 6417* and *Garrett 1336*) its discovery in the Charleston Mountains is indeed surprising; however, there can be little doubt of its identity since the collections made by Clokey are practically identical with that of Rydberg and Carlton.

University of Washington,
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NOTES ON CERTAIN CRUCIFERAE OF MEXICO AND SOUTHWESTERN UNITED STATES

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A series of specimens from Mexico recently referred to me for determination by Dr. I. M. Johnston, served to call my attention to the need for critical study in two rather poorly known genera of the Cruciferae. After a superficial examination, it soon became evident that a complete study of both genera would be necessary before they could be clearly understood and the plants placed with some certainty. The genera involved are *Nerisyrenia,* more familiarly known as *Greggia* of Gray, and *Synthlipsis.* Both are small genera of the western hemisphere and have a rather

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